
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

FORM 8-A

**FOR REGISTRATION OF CERTAIN CLASSES OF SECURITIES
PURSUANT TO SECTION 12(b) OR (g) OF
THE SECURITIES EXCHANGE ACT OF 1934**

Neothetics, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State of incorporation or organization)

20-8527075
(I.R.S. Employer Identification No.)

9191 Towne Centre Drive, Suite 400
San Diego, CA
(Address of principal executive offices)

92122
(Zip Code)

Securities to be registered pursuant to Section 12(b) of the Act:

**Title of each class
to be so registered**
Common Stock, \$0.0001 par value

**Name of each exchange on which
each class is to be registered**
The NASDAQ Stock Market LLC

If this form relates to the registration of a class of securities pursuant to Section 12(b) of the Exchange Act and is effective pursuant to General Instruction A. (c), check the following box.

If this form relates to the registration of a class of securities pursuant to Section 12(g) of the Exchange Act and is effective pursuant to General Instruction A. (d), check the following box.

Securities Act registration statement file number to which this form relates:
333-199449.

Securities to be registered pursuant to Section 12(g) of the Act:
None.

Item 1. Description of Registrant's Securities to be Registered.

A description of the common stock, par value \$0.0001 per share (the "Common Stock"), of Neothetics, Inc., a Delaware corporation (the "Registrant") to be registered hereunder is set forth under the caption "Description of Capital Stock" in the prospectus included in the Registrant's Registration Statement on Form S-1 (Registration No. 333-199449) as originally filed with the Securities and Exchange Commission (the "Commission") on October 17, 2014, as subsequently amended (the "Registration Statement"), and is incorporated herein by reference. In addition, a description of the Common Stock will be included in a prospectus to be subsequently filed by the Registrant with the Commission pursuant to Rule 424(b) under the Securities Act of 1933, as amended, relating to the Registration Statement, and such prospectus is incorporated herein by reference.

Item 2. Exhibits.

Pursuant to the Instructions as to Exhibits with respect to Form 8-A, no exhibits are required to be filed because no other securities of the registrant are registered on The NASDAQ Stock Market LLC and the securities registered hereby are not being registered pursuant to Section 12(g) of the Securities Exchange Act of 1934, as amended.

SIGNATURE

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, the Registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereto duly authorized.

Date: November 18, 2014

Neothetics, Inc.

By: /s/ George W. Mahaffey

Name: George W. Mahaffey

Title: President and Chief Executive Officer